

Blend

- 3 between every winding slot and to remove peak current
4 between said excited phase and said inexcited phase.

Please replace claim 5 with the following:

B2
cont.

- 1 5. (AMENDED) A constant-power brushless DC motor
2 comprising:
3 a stator constituted by at least two phases, each of
4 the phases having plurality of windings wound in a
5 distributed, parallel, winding and being independently
6 connected with the each H-bridge circuit of a power
7 switching stage without inter-connection;
8 a rotor rotatably coupled to said stator and having an
9 even plurality of permanent magnet poles, the motor having
10 said permanent magnet rotor in which the magnetic
11 arrangement is radial to the shaft and integral to said
12 rotor laminations, said rotor laminations having empty
13 spaces between every each magnet in said rotor; and
14 a commutation encoder externally set to one side of
15 the shaft of said rotor and having sensing regions and
16 nonsensing regions, wherein the number of phases among the
17 at least two phases, which will be excited, is determined
18 by the distance of each sensing region, wherein the
19 distance of said sensing regions being determined by the
20 following formula:

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	n	total phases
1, 2, 3, ...	a	excited phases,
1, 2, 3, ...	b	inexcited phases

$$\frac{2\pi}{\text{the number of poles in the rotor}} \times \frac{(n-b)\text{phases}}{\text{the number of phases}} (\text{degrees})$$

27

28 the number of said sensing regions is determined by the
29 following formula:

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$$\frac{\text{number of poles}}{2} ;$$

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33 photo sensors positioned operatively with said
34 commutation encoder and constituted so that two
35 photo-sensors are provided with respect to each phase, each
36 of said photo-sensors in the at least two phases being
37 arranged, in turn, one by one at intervals of predetermined
38 shaft angle so as to produce a positive pulse when
39 registered with said sensing of said commutation encoder,
40 and said interval is determined by the following formula:

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$$\frac{2\pi}{\text{the number of poles in the rotor}} \times \frac{1}{\text{the number of phases}} (\text{degrees}) ;$$

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44 an electronic commutator constituted such that an
45 H-bridge is connected across the windings of each phase of
46 said stator, a half H-bridge of each phase being connected
47 to one photo-sensor so that each phase is provided with two
48 photo-sensors so as to determine the current direction
49 according to the positive pulse of the photo-sensors,
50 thereby flowing the alternating current of part-square wave
51 through the windings to drive the motor, and an electric
52 power source connected in parallel to each phase of said
53 electronic commutator.

Please add the following new claims:

- B³
- 1 7. (NEW) The motor according to claim 3 wherein
2 n > b > 1, n corresponding to the number of phases, b
3 corresponding to the number of inexcited phases.
- 1 8. (NEW) The motor according to claim 1 wherein
2 constant power is delivered by the motor.
- 1 9. (NEW) The motor according to claim 5 wherein
2 n > b > 1, n corresponding to the number of phases, b
3 corresponding to the number of inexcited phases.
- 1 10. (NEW) The motor according to claim 5 wherein
2 constant power is delivered by the motor.

In accordance with 37 C.F.R. § 1.121(c)(ii), a separate sheet(s) with the rewritten claims marked-up to show the changes made to the previous version of the claims, is filed herewith.

REMARKS

In view of the foregoing amendments and the following remarks, the applicant respectfully submits that the pending claims are not ambiguous under 35 U.S.C. § 112 and are not unpatentable under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicant respectfully requests that the Examiner contact the undersigned to schedule a telephone